



# **Controlled Vocabulary**

**MSRR Board of Directors**  
**12 January 1999**



# Agenda

- ❑ **Search Overview**
- ❑ **Controlled Vocabulary**
  - \* **What is it?**
    - ❑ **Concept**
    - ❑ **Structure**
    - ❑ **Example**
- ❑ **MSRR Controlled Vocabulary**
- ❑ **Summary**



# Search Logic

- ❑ **Successful search is dependent on:**
  - ✱ **Locating the material**
    - ❖ **Source(s)**
  - ❑ **Having access to the information**
    - ❖ **Physical**
    - ❖ **Remote**
  - ❑ **Precision of the information (Relevance)**
    - ❖ **Provides the needed information**
  - ❑ **Identifying the right amount**

Source: <http://www.roma.unisa.edu.au/08908/lect6/sld023.h>



# Types of Searches

- ❑ **Keyword / Free Text / Natural Language search**
  - \* **Return: High ↑**
  - ❑ **Precision / relevance: Low ↓**
  - ❑ **Uses free language, natural language**
  - ❑ **Unlimited number of terms**
  - ❑ **All fields searched**
  - ❑ **More flexible**

<http://www.roma.unisa.edu.au/08908/lect6/sld020.htm>



# Types of Searches

## ❑ **Subject Search**

**\*Return: Low ↓**

❖ **Subject search produces a smaller number of items than a keyword search**

❑ **Precision / relevance: High ↑**

❖ **Subject search results tend to be more specific, less general**

❑ **Subject field searched**

❑ **Predetermined subject headings (Controlled Vocabulary)**



# **Controlled Vocabulary Concept Know by Many Names**

❑ **Controlled Vocabulary is also know as:**

**\* Key Word List**

❑ **Key Work Index**

❑ **Subject Authority**

❑ **Subject Headings List**

❑ **Thesaurus**

❑ **Authority Files**

❑ **Descriptors**

**\* Classification  
schemes**

❑ **Index Strings**

❑ **Name Authority Files**

❑ **Vocabulary Control**

❑ **Taxonomy**

❑ **Access Point Control**



# Controlled Vocabulary Definition

## ❑ What is it?

**\* Regularized or standardized list of terms used to increase uniformity in indexing or information retrieval.**



# Controlled Vocabulary Concept

- ❑ Gives the hierarchical and associative relations of a concept
- ❑ Establishes the size or scope of each topic
- ❑ Identifies synonymous terms and selects one preferred term among them
- ❑ Identifies the multiple concepts expressed by homonyms
- ❑ Same term can not be used for more than one subject
- ❑ Subject heading lists must keep up with current usage and vocabulary

<http://luna.cas.usf.edu/~gregory/subjhead/sld005.h>





# Controlled Vocabulary Concept

## ❑ Advantages

- \* Increased likelihood that both the cataloger & searcher will express the concept in the same way
- ❑ Increased likelihood that different catalogers will use terms consistently
- ❑ Increased likelihood that both the cataloger & searcher will be led to the desired heading by the *see* and *see also* structure

## ❑ Disadvantages

- ❑ Searching may be more complex
- ❑ Controlled vocabulary may be hard to visualize
- ❑ Controlled vocabulary may not contain latest terms
- ❑ Requires periodic maintenance

<http://luna.cas.usf.edu/~gregory/subjhead/sld005.h>



# Controlled Vocabulary Structure

- ❑ **Controlled Vocabulary Structure**
  - \* **Equivalence (unauthorized or non-preferred terms)**
    - ❖ **USE Terms (USE)**
    - ❖ **Use For Terms (UF)**
  - ▮ **Hierarchy**
    - ❖ **Broader Terms (BT)**
    - ❖ **Narrower Terms (NT)**
  - ▮ **Associated**
    - ❖ **Related Terms (RT)**
- ❑ **Reciprocal relationships**



# Controlled Vocabulary Example

Air defenses

UF ...

BT ...

NT Airborne warning and control systems

Airborne warning and control systems

UF AWACS

BT Air defenses

Arms Control

BT ...

NT ...

RT Disarmament

AWACS

USE Airborne warning and control systems

Disarmament

BT ...

NT ...

RT Arms Control



# Controlled Vocabulary Equivalence Terms

## Air defenses

UF ...

BT ...

NT Airborne warning and control systems

## Airborne warning and control systems

**UF AWACS** ←

BT Air defenses

## Arms Control

BT ...

NT ...

RT Disarmament

## AWACS

**USE Airborne warning and control systems**

## Disarmament

BT ...

NT ...

RT Arms Control



# Controlled Vocabulary Hierarchy Terms

Air defenses

UF ...

BT ...

**NT Airborne warning and control systems**

Airborne warning and control systems

UF AWACS

**BT Air defenses**

Arms Control

BT ...

NT ...

RT Disarmament

AWACS

USE Airborne warning and control systems

Disarmament

BT ...

NT ...

RT Arms Control



# Controlled Vocabulary Associated Terms

## Air defenses

UF ...

BT ...

NT Airborne warning and control systems

## Airborne warning and control systems

UF AWACS

BT Air defenses

## Arms Control

BT ...

NT ...

**RT Disarmament**

## AWACS

USE Airborne warning and control systems

## Disarmament

BT ...

NT ...

**RT Arms Control**



# Controlled Vocabulary Electronic Example

- ❑ **<http://www.cisti.nrc.ca/irc/thesaurus/welcome.html>**



# MSRR Controlled Vocabulary Potential Sources

- ❑ **What are the potential sources for MSRR controlled vocabulary?**
  - ❑ **MSRR Key Word List**
  - ❑ **Published Controlled Vocabularies**





# **MSRR Controlled Vocabulary MSRR Key Word List**

- ❑ **Contains 221 terms**
- ❑ **Series of two lists**
  - ✱ **DMSO Glossary**
  - ▮ **JCS Pub 1-02**
  - ▮ **Changes from MSOSA**
- ❑ **Contains Key M&S Terms**
- ❑ **Not structured as a controlled vocabulary**
  - ▮ **Flat / Non-hierarchical**



# **MSRR Controlled Vocabulary Published Controlled Vocabularies**



- ❑ **Spines Thesaurus (Science & Technology Development) (1988)**
- ❑ **Library of Congress Subject Headings (1997)**
- ❑ **Defense Technical Information Center (DTIC) Thesaurus (1996)**



# **MSRR Controlled Vocabulary Library of Congress Subject Headings**



- ❑ Contains large amount of terms (250,000)**
- ❑ Continually revised since turn of the century (Updates annually)**
- ❑ Broad base of terms across all disciplines**
- ❑ Widely used controlled vocabulary**



# **MSRR Controlled Vocabulary DTIC Thesaurus**

- ❑ Contains large amount of terms (14,000)**
- ❑ Continually revised since 1950s (Updates monthly)**
- ❑ More focused terms for disciplines related to modeling and simulation**



# Controlled Vocabulary Summary

- ❑ **Why have it?**
  - ❑ **Structure / hierarchy**
  - ❑ **Standardized language**
  - ❑ **Consistency**
  - ❑ **Subject headings for cataloging**
  - ❑ **Adaptable over time**
  - ❑ **Facilitates more concise searches**



# **Backup Slides**

# Objectives of Subject Access Points

- ❑ Two basic functions of subject headings are assumed:
  - \* Subject headings enable the catalog user to find in the catalog an item of which the subject's known; and,
  - ▮ Subject headings enable the catalog user to find what the library has on a given subject. These functions parallel those attributed to name headings in the catalog. Basically, they assist in the location of individual items in the collection as well as collocation of related items.

<http://www.tlcdelivers.com/tlc/crs/shed0166.htm>



# Controlled Vocabulary

- ❑ What is an index?
  - \* Systematically arranged list providing access to the contents of a file, document or group of documents

# Precision & Recall

- ❑ Precision: Ability of a retrieval system to retrieve only the relevant documents
- ❑ Recall: Ability of a retrieval system to retrieve all of the relevant documents